

Work Order ID 144910

April 27, 2016 12:57:25 PM

144910

Page 1

Item ID: D3942-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Angle
 Start Date: 5/3/2016 Start Qty: 100.00 *100* Cust Item ID:
 Required Date: 5/24/2016 Req'd Qty: 100.00 *100* Customer:
 Reference:

Approvals: Process Plan: *gem* *Set* Date: *16/04/21* Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3942	C								
100		0.01							
100									
Waterjet	Memo	2.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3942-1								
	Dwg Rev: <i>C</i>								
	Prog Rev: <i>C</i>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	1.00							
Quality Control									

(110)

De 16/05/11

(110)

De 16/05/11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 144910

April 27, 2016 12:57:25 PM

144910

Page 2

Item ID: D3942-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Angle

Stop

NS2

Start Date: 5/3/2016 Start Qty: 100.00

100

Cust Item ID:

Required Date: 5/24/2016 Req'd Qty: 100.00

100

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

2.00

Quality Control

DAS
38
9-89

MAY 11 2016

130

0.19

130

Brake NC

Memo

1.00

Brake NC

1- Bend as per dwg D3942

DAS
30
9-89

MAY 11 2016

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

2.00

Quality Control

DAS
38
9-89

MAY 16 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER : ☐																									

April 27, 2016 12:57:25 PM

Page 3

Setup Start *NS1*

Stop *NS2*

Start Date: 5/3/2016 **Start Qty:** 100.00

Customer:

Run Start *NR1*

Stop ***NR2***

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Identify as per dwg & Stock Location: *Y 060* 0.00

150

Packaging

Packaging

Memo

1.00

110

DATE
6
8-89

MAY 17 2016

160

QC21- Final Inspection - Work Order Release

0.00

160

OC

Quality Control

Memo

10.00

ML5

MAY 17 2016

MAY 17 2016

MCS

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

April 27, 2016 12:57:30 PM

Page 1

Work Order ID: 144910

144910

Parent Item: D3942-1

D3942-1

Parent Item Name: Angle

Start Date: 5/3/2016

Required Date: 5/24/2016

Start Qty: 100.00

Required Qty: 100.00

Comments: Ipp Rev:A UPDATE TO REV B 10-11-24 JLM VERIFIED BY:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased		No		100	sf	385.3732	0.015	1.578947			

M304S18GA

304/316 .050 Sheet

on 16/05/11

Location

Loc Qty

Loc Code

MAT020

164.021

M133328

110.796

M133587

53.225

MAT20

128

M134580

128

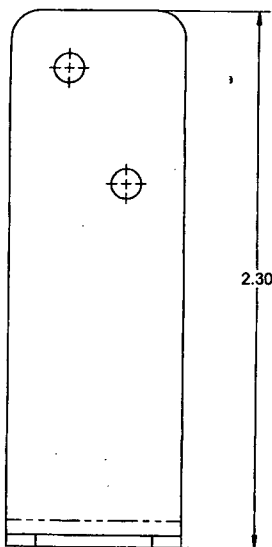
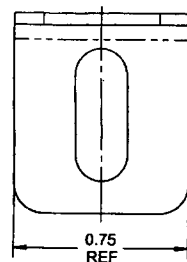
TPI

93.3522

M134604

93.3522

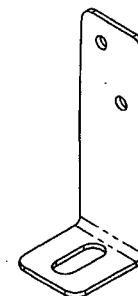
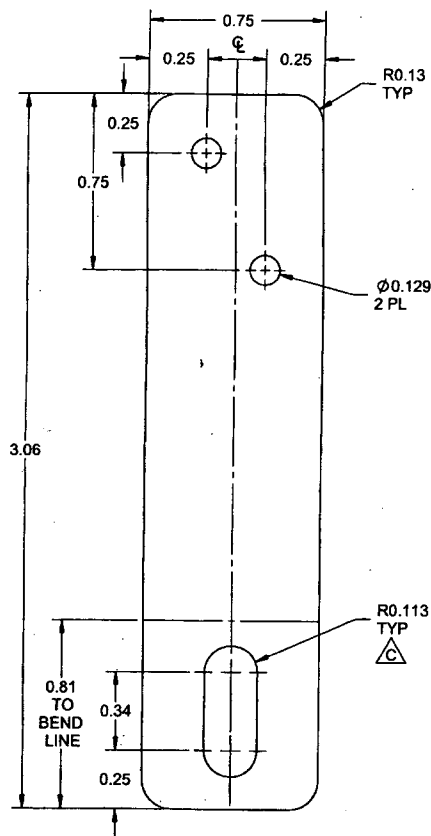
2.5



0.050
REF

R0.06

D3942-1 ANGLE
MADE FROM D3942-1F



D3942-1F FLAT PATTERN

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR AMS 5524
18 GAUGE (0.050 THICK)
REF DART SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.03 lbs

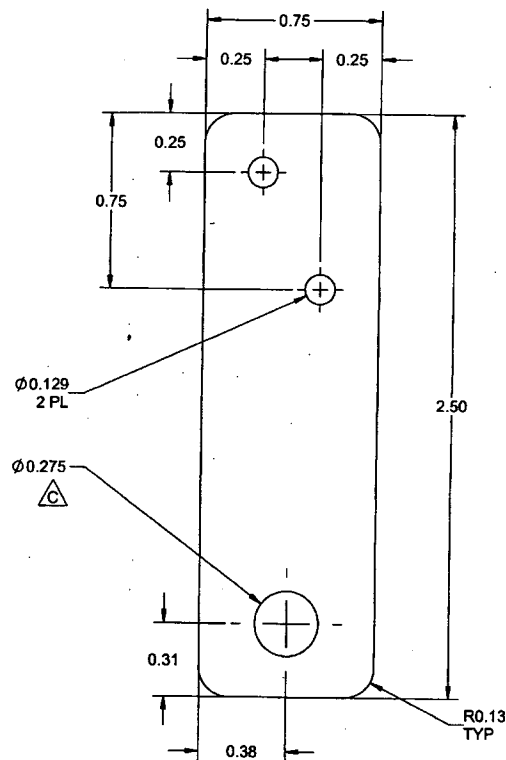
C	INCREASE SLOTHOLE SIZE TO ALLOW PROPER FITTING OF PANEL : 0.113 WAS 0.094, ZN B2-1; 0.275 WAS 0.257, ZN C5-2 (REF PAR 10-008)	XDF	11.09.02
B	REVISE LENGTH OF -3 PART, ZN C3-2; UPDATE IDENTIFICATION, ZN A7-1, A7-2	HS	10.11.19
A	NEW ISSUE	HS	09.05.06
REV.	DESCRIPTION	BY	DATE

DESIGN		DART AEROSPACE LTD	
DRAWN	XDF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3942	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS.
DATE	11.09.02	COPYRIGHT © 2003 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD			

w/o 144910

2m 16/04/27

0.050
REF



D3942-3 CLIP

RELEASED
2011-12-12

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR AMS 5524
18 GAUGE (0.050 THICK)
REF DART SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044.6.1
- 7) WEIGHT: 0.03 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN	XDF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3942	REV. C
MFG. APPR.		SHEET 2 OF 2	
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS:
DATE	11.09.02	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	